



State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES

6 Hazen Drive, P.O. Box 95, Concord, NH 03302-0095
(603) 271-3406 FAX (603) 271-7894



June 10, 2003
Letter of Deficiency
DSP #03-041

Town of Walpole
Office of the Selectmen
P.O. Box 729
Walpole, NH 03608

RE: Walpole Reservoir Dam#242.03, Walpole

Dear Chairman Cashel:

The Department of Environmental Services, Dam Bureau (DES) consistently strives to enhance the safety of dams in New Hampshire through its dam safety program. One of the many instruments that play a part in reaching this goal is our inspection program. DES is forwarding this correspondence to you to advise you that in accordance with RSA 482:12 and Env-Wr 502.02, an inspection of the subject dam was conducted on May 28, 2003. During this visual inspection and/or file review, the following deficiencies were observed:

The corrugated metal pipe (cmp) drop inlet had deteriorated to the point of failure approximately 5 feet below normal. The pond was being maintained approximately 1 foot higher due to what appears to be a natural small weir. The outlet pipe appeared to be in good condition with no deterioration;

2. There was a slotted cover on top of the failed drop inlet significantly reducing the capacity of the primary outlet;

There were trees and brush within 15 feet of the downstream primary cmp outlet;

4. There was a rodent hole at the downstream crest of the dam in the corner of the dam left of the primary outlet and right of the low level outlet;
5. The crest of the dam was well maintained;
6. There were two large trees, which had previously been cut and dropped on the downstream embankment near the low-level outlet;
7. The downstream embankment on a majority of the dam had low growing brush. It was indicated, to the undersigned, that the embankments are maintained once per year;
8. Ten feet right of the low-level outlet an orange staining was observed, which could previously have been seepage. No seepage flow was observed on this date;
9. There was displaced vitrified clay pipe (vcp) at the outlet section to the low-level outlet. However, the vcp appeared to be in good condition. It was also unclear as to the functionality of the low-level outlet;

10. There was an erosion gully approximately 50 feet downstream from the impoundment within the emergency spillway, which could partially be the result of the reduced outflow from the primary outlet. It also appeared that the downstream end of the emergency spillway had become overgrown with trees and brush;

There was some debris within the emergency spillway; and

12. There was no operation and maintenance plan (O&M) on file with the DES.

DES believes that the above deficiencies can be corrected by performing the following items by the indicated schedule:

November 30, 2003:

- Repair or replace the failed drop inlet to be no higher than the original design. Depending on the scope of work a dam permit and/or a wetlands permit may be necessary;
- 2 Remove the slotted cover from the current riser structure and eliminate the slotted cover from any new riser as it significantly reduces flow through the primary outlet;
 - 3 Remove the trees and brush within 15 feet of the primary outlet cmp;
 - 4 Repair the rodent hole on the downstream crest of the embankment in the corner of the dam, left of the primary outlet and right of the low level outlet with compacted material. Upon filling of the rodent hole establish an erosion resistant cover;
 - 5 Remove the trees, which were previously felled along the downstream toe of the dam near the low-level outlet;
 - 6 Prepare and submit to the DES a written O&M plan. The plan should describe the control of impoundment levels, monitoring and maintenance procedures, and identify emergency contact personnel. Additionally the following should be included:
 - a. Maintenance of the brush and small trees along the downstream embankments;
 - b. Monitor the possible seepage ten feet to the right of the low-level where orange staining was observed. It is likely that if the orange staining is from seepage it may continue upon the resumption of the normal water level;
 - 7 Investigate and repair the low-level outlet gate/operator and 6" outlet pipe and report to our office as to the functionality of the low-level outlet; and

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8. Repair the erosion gully in the vegetated spillway by placing and compacting appropriate fill material and establishing a hearty vegetative cover. Additionally, clear the vegetated spillway of debris and trees prior to establishing a hearty vegetative cover.

DES is requesting that you complete and submit the attached "Intent to Complete Repairs" form, within 30 days of receipt of this letter, that will provide for correction of the identified deficiencies by the date(s) indicated above. Please call or write to our office if the repairs are completed ahead of the aforementioned schedule so that DES may schedule a follow-up inspection. Unless notified otherwise, DES will conduct the follow-up inspection on or after the date(s) indicated above. If you believe changes to the items of work or dates are necessary, please make the changes directly on the form and provide a brief explanation. Please call or write to our office if the repairs are completed before the aforementioned schedule. We have enclosed a self addressed stamped envelope for you to return this form.

Our intent in sending you this correspondence is to make you aware of items that DES believes warrant your attention to insure the continued safe operation of your dam. It is our hope that, through the submittal of the attached form and a commitment to keeping a well-maintained dam, you will voluntarily comply with the requested items of work. If we do not receive the intent form or a similarly adequate written reply, we will assume that you are in agreement with our findings and recommendations and DES will carry out follow-up inspections accordingly.

If you have any questions or comments regarding this Letter of Deficiency or would like to be present at future inspections, please contact me at 271-3406, or write to the Water Division at the address listed on the top of the previous page.

Sincerely,

COPY

Dale F. Guinn, P.E.
Dam Safety Engineer

Attachments Guideline for an O&M plan, DB8, DB13

cc: Gretchen Rule ✓

Certified # 7000 1670 0000 0586 2169

DFG/was/h:/safety/wendy/lod/242-03lod.doc